



**U.S. Department of Energy  
Joint  
Distributed Power and Industrial DG  
Program Review/Peer Review**

**January 29-February 1, 2002  
Arlington, VA**

The DOE Distributed Power Program and Industrial Distributed Generation Program will hold a joint Program Review/Peer Review on January 29 – February 1, 2002, at the Ritz- Carlton, Pentagon City, 1250 South Hayes Street, Arlington, VA. This meeting will provide an opportunity for you to evaluate both programs' efforts in FY 2001, preview activities for FY 2002, and help formulate plans to address longer-term R&D needs. These longer-term needs will focus on system integration R&D needs for capturing the full value of distributed power in an electricity market in which customers can sell power, employ load management, and provide operations support services (ancillary services) as easily as the utility, in an automated and adaptive electric power system. In the foreseeable future, distributed power will provide the ultimate choice of electricity supply for consumers and will be the real foundation of competition in the electric power industry.

Distributed Power Program activities, which will be described in detail at the program, include:

- Optimal control, energy management and communications technologies for integration and management of distributed energy resources in a power park or micro-grid;
- Strategies and control and communications technologies for remote operation of aggregates of distributed energy resources for participation in markets for electricity and ancillary services;
- Development of reliable, low cost, modular plug-and-play interconnection technology;
- Case studies and field testing to validate the IEEE P1547 interconnection standard; and
- Development of certification methodologies.

Industrial Distributed Generation activities to be reviewed include:

- Sensitive load applications, e.g., semiconductor manufacturing
- High reliability applications, e.g., telecommunications
- Highly varying loads, e.g., steel mills
- High tech data industry applications

**Please join your colleagues in this important meeting.**

The attached fact sheet and registration form provide further information on the meeting.



**U.S. Department of Energy**  
**Office of Power Technologies**  
**Distributed Power Program/Industrial DG Program**  
**Annual Review**  
**January 29-February 1, 2002**  
**Arlington, VA**

**Final Agenda**

**Tuesday, January 29, 2002**

**Registration/Continental Breakfast**

**7:30 AM to 8:30 AM**

**Session: Opening**

**8:30 AM to 10:30 AM**

Session Chair: Joe Galdo, DOE

**DOE Welcome**

**Industry Perspectives**

Bill Williams, IEEE-USA

Richard Brent, Solar Turbines

**DOE DER Strategy-** Patricia Hoffman, Director, Office of Distributed Energy Resources

**Overview of the Distributed Power Program** – Joe Galdo, DP Program Manager

**Break**

**10:30 AM - 10:45 AM**

**Session : Technical Interconnection Requirements and Testing – Part 1**

**10:45 AM - 12:15 PM**

Session Chair: Richard DeBlasio, NREL

1. **IEEE/P1547 - Electric Power Resources Interconnected with the Electric Power System** – Richard DeBlasio, NREL, Member IEEE Standards Board
2. **Pilot Interconnection Test at Nevada Test Site** – Ben Kroposki, NREL
3. **Distributed and Electric Power System Aggregation Model Determination and Field Configuration Equivalency Validation Testing** - Murray Davis, DTE Energy Technologies Company

**Discussion**

**Lunch (on your own)**

**12:15 PM - 1:30 PM**

**Session : Technical Interconnection Requirements and Testing – Part 2**

**1:30 PM - 3:15 PM**

Session Chair: Thomas Basso, NREL

4. **Evaluation of the Field Performance of Fuel Cells** – Edward Torrero, National Rural Electric Cooperative Association
5. **Nevada Test Site - Potential Test Bed for DER System Interconnection/Integration Testing** – Susan Horgan, Distributed Utility Associates
6. **Distributed Utility Integration Test** – Joe Iannucci, Distributed Utility Associates

7. **Development of a UL Standard for Distributed Generation** – Tim Zgonena, Underwriters Laboratories Inc.
8. **Certification Lab Pilot and Interconnection Handbook** – Tom Key, EPRI PEAC

**Discussion**

**Break**

**3:15 PM - 3:30 PM**

**Session: Standards, Codes, and Regulations**

**3:30 PM - 5:30 PM**

Session Chair: Gary Nakarado, NREL

1. **Regulatory Policy Options for DER** – Cheryl Harrington, Regulatory Assistance Project
2. **FERC Distributed Generation Activities** - Dan Adamson
3. **Model Emissions Rule** - Cheryl Harrington, Regulatory Assistance Project
4. **Local Permitting for DER** – Anne-Marie Borbely-Bartis, PNNL

**Discussion**

**Wednesday January 30, 2002**

**Registration/Continental Breakfast**

**7:30 AM - 8:30 AM**

**Session: System Integration and Control – Part 1**

**8:30 AM - 10:30 AM**

Session Chair: Holly Thomas, NREL

1. **System Integration of Distributed Power for Complete Building Systems** – Dr. Robert Kramer, NiSource Energy Technologies, Inc.
2. **Development, Demonstration, and Field Testing of Enterprise-Wide Distributed Generation Energy Management System** – Steven Greenberg, Real Energy
3. **Aggregated Distributed Generators** – Howard Feibus, Electrotek
4. **Fast-Response, Load-Matching Hybrid Fuel Cell** – Tom Key, EPRI PEAC

**Discussion**

**Break**

**10:30 AM - 10:45 AM**

**Session: System Integration and Control – Part 2**

**10:45 AM - 12:30 PM**

Session Chair: Ben Kroposki, NREL

1. **Innovative Distributed Power Grid Interconnection and Control System** - William Liss, GRI/ Greg Miller, Encorp
2. **Reliable, Low Cost Distributed Generator/Utility System Interconnect** – Nick Miller, General Electric Corporate R&D
3. **Distributed Energy Neural Network Integration System (DENNIS)** – Dr. Thomas Regan, Orion Engineering Corporation
4. **Hardware Demonstration of the Feasibility and Value of Distributed Resources as a Solution to the Sensitive Load Problem** – Dr. Robert Lasseter, University of Wisconsin

**Discussion**

**Lunch (on your own)**

**12:30 PM - 1:30 PM**

**Session: Industrial Distributed Generation**

**1:30 PM - 3:30 PM**

Session Chair; Merrill Smith, DOE

1. **Overview**– Tom Rzy, ORNL
2. **Increasing the Use of DG in the Semiconductor Industry**– Barry Cummings, Salt River Project
3. **Highly Varying Industrial Load** – Dr. Robert Kramer, NiSource Energy Technologies, Inc.
4. **DG Integration with Telecommunications Facility** – Doug Peck, Syska & Hennessy
5. **CHP Integration with Fluid Heating Processes in the Chemical and Refining Sectors** – **Henry Mak**, Southern California Gas Co.
6. **CHP Installation at 29 Palms Marine Air Ground Combat** – Henry Mak, Southern California Gas Co.

**Discussion**

**Break**

**3:30 PM - 3:45 PM**

**Session: Industrial Distributed Generation**

**3:45 PM – 5:00 PM**

Session Chair; Mike Karnitz, ORNL

7. **DG Improvements in Industrial Applications** – Rich Biljetina, Industrial Center
8. **Chicago Industrial Energy Plan** – John Kelly, Gas Technology Institute
9. **New York State Industrial DG** – Nag Patibandla, NYSERDA
10. **Industrial DG Market Transformation Tools** – Paul Bautista, Onsite Sycom

**Discussion**

**Open Discussion and Wrap-up**

**5:00 PM – 5:30 PM**

**DPP/IDG meeting Adjournment**

**5:30 PM**

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# **IEEE SCC21 P1547 Draft Standard for Interconnecting Distributed Resources With Electric Power Systems Meeting**

January 31 through February 1, 2002)

## **Key Activities Planned**

- Refinement of P1547 Draft document content to state the mandatory, minimum functional technical requirements that are universally needed to help assure a technically sound interconnection.
- Consideration of new SCC21 interconnection projects:
  - P1589 Draft Standard For Conformance Test Procedures for Equipment Interconnecting Distributed Resources With Electric Power Systems
  - P1608 Draft Application Guide for IEEE Std. 1547 Standard for Interconnecting Distributed Resources With Electric Power Systems
  - Potential new SCC21 PAR for DR communication/control

## **Schedule Planned.**

### **Thursday, January 31, 2002**

**7:30 AM to 9:00 PM**

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|--|--------------------|
| • Registration/Continental Breakfast   | 7:30 AM to 8:15 AM |
| • Welcome -- Chair: Richard DeBlasio   | 8:15 AM – 8:30 AM  |
| • Update on SCC21/P1547 – T. Basso, Secretary SCC21/P1547  | 8:30 AM – 9:00 AM  |
| • Approach to P1547 Draft 8 Refinement   | 9:00 AM – 12:15 AM |
| ➤ Introduction of P1589 project – J. Daley, Chair; B. Kroposki, Secretary,   |                    |
| ➤ Introduction of P1608 project – N. R. Friedman, Chair; T. Basso, Secretary   |                    |
| ➤ Introduction of potential new PAR on DR communication/control -- R. DeBlasio, SCC21 Chair; F. Goodman & J. Koepfinger, P1547 Co-Vice-Chairs        |                    |
| • Lunch (on your own)  | 12:15 PM – 1:30 PM |
| • Consideration of P1547 Refinement (break included)   | 1:30 PM to 5:00 PM |
| • Dinner (on your own)   | 5:00 PM – 7:00 PM  |
| • Formation Meeting  | 7:00 PM to 9:00 PM |
| ➤ Potential new SCC21 PAR for DR communication/control & WG membership – R. DeBlasio, SCC21 Chair; F. Goodman & J. Koepfinger, P1547 Co-Vice-Chairs. |                    |

### **Friday February 1, 2002**

**7:30 AM to 5:00 PM**

- |   |                     |
|---|---------------------|
| • Registration/Continental Breakfast                | 7:30 AM to 8:00 AM  |
| • Review of Previous Day Meetings                   | 8:00 AM to 9:00 AM  |
| ➤ Formation Meeting Summary                         |                     |
| ➤ P1547 Refinement Summary                          |                     |
| • Continuation of P1547 Refinement (break included) | 9:00 AM to 12:15 PM |
| • Lunch (on your own)                               | 12:15 PM – 1:30 PM  |
| • Continuation of P1547 Refinement (break included) | 1:30 PM to 4:00 PM  |
| • Adjournment/Next Meetings/Concluding Remarks      |                     |
| – Chair R. DeBlasio                                 | 4:00 PM to 5:00 PM  |

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## U.S. Department of Energy

### Distributed Power Program Industrial Distributed Generation Program

#### Joint Program Review Meeting January 29-February 1, 2002 Arlington, VA

#### FACT SHEET

**Location:**

The session will be held at the Ritz-Carlton Pentagon City, a full-service hotel located just ten minutes from downtown Washington, D.C. and five minutes from Ronald Reagan National Airport. Located on the Blue and Yellow Metro lines, the Ritz-Carlton Pentagon City is easily accessible from all over the D.C. area. Hotel amenities include: 360 oversized guestrooms with dedicated work spaces, dataports, fax machines, panoramic views of our capital city, and a complimentary membership to the on-site fitness center.

The Ritz-Carlton, Pentagon City  
1250 South Hayes Street  
Arlington, VA 22202  
Phone: 800.241.3333

**Registration:**

Please complete the registration form on the other side of this sheet and send to:

Sara Huntley  
National Renewable Energy Laboratory  
1617 Cole Boulevard, MS 1623  
Golden, CO 80401

EM: sara\_huntley@nrel.gov  
PH: 303.275.4317  
FX: 303.275.4320

There is no registration fee for this meeting, but you must pre-register for meal planning and room set purposes. For further information, please visit: <http://www.eren.doe.gov/distributedpower/>



**U.S. Department of Energy  
Joint  
Distributed Power and Industrial DG  
Program Review/Peer Review**

**January 29-February 1, 2002  
Arlington, VA**

**REGISTRATION FORM**

**Name** \_\_\_\_\_

**Affiliation** \_\_\_\_\_

**Address** \_\_\_\_\_

**City** \_\_\_\_\_ **State** \_\_\_\_\_ **Zip** \_\_\_\_\_

**Phone** \_\_\_\_\_ **Fax** \_\_\_\_\_

**Email** \_\_\_\_\_

**Please indicate the dates you plan to attend (for logistical planning purposes):**

\_\_\_\_\_ Tuesday, January 29, 2002  
\_\_\_\_\_ Wednesday, January 30, 2002  
\_\_\_\_\_ Thursday, January 31, 2002  
\_\_\_\_\_ Friday, February 1, 2002

**Hotel Reminder:**

The meeting will be held at the Ritz-Carlton, Pentagon City, 1250 South Hayes St., Arlington, VA.  
Call **800.241.3333** to make your reservations.

**Please complete this form and return by January 14, 2001 to:**

Sara Huntley EM: sara\_huntley@nrel.gov  
NREL Conferences PH: 303.275.4317  
1617 Cole Boulevard, MS 1623 FX: 303.275.4320  
Golden, CO 80401

For further information, please visit:  
<http://www.eren.doe.gov/distributedpower/>

*For Office Use Only*

Date Received: \_\_\_\_\_

People ID: \_\_\_\_\_

Registration ID: \_\_\_\_\_

Visit <http://www.eren.doe.gov/distributedpower/> for more information.